IMPAC³T

WP3: Technology Trends
D3.2: Case Studies and Good Practice transfer paths

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List of Acronyms

AI	Artificial Intelligence
API	Application Programming Interface
CLM	Contract Lifecycle Management
CRM	Customer Relationship Management
EU	European Union
FTO	Freedom to Operate
GDPR	General Data Protection Regulation
IP	Intellectual Property
LLM	Large Language Model
NHS	National Health Service
NSF	National Science Foundation
R&D	Research and Development
SME	Small and Medium Enterprises
TTO	Technology Transfer Office
UCL	University College London
WashU	Washington University in St. Louis
WP	Work Package

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1. Introduction to the document

This document is Deliverable 3.2 of the IMPAC3T-IP project.

IMPAC3T-IP is an ambitious Coordination and Support Action that aims to develop, pilot and support the sustainable adoption of a scenario based licensing ToolBox through a certified user and trainer programme, for efficient IP licensing for market uptake and societal value creation. IMPAC3T-IP explores three main licensing scenarios:

- Classical Plus – licensing that encompasses newer types of IP assets e.g. assets that are not patent based and are therefore different to the assets that have formed the main part of the traditional for-profit licensing approach.
- Crisis – licensing that takes place in repose to or to prevent crisis situations such as emerging or preventable medical emergencies.
- Co-creation – licensing that takes place as a result of interactions involving multiple different stakeholders and that goes beyond classical collaborations and contract research.

This document is an output of Work Package 3: Technology trends

1.1. Aims and objectives of WP3

Work Package 3 (WP3) had two main tasks:

Task 3.1 Technology scanning

Examples of integration of new technology into licensing activity as well as technology use to present opportunities and digitally execute deals online were identified. The work was based on desk-based research, including interaction with the IMPAC3T-IP special interest groups (SIGs) and wider licensing groups.

The results are contained in the associated D3.1 deliverable report.

Task 3.2 Case study development

Examples of novel use of technology to facilitate licensing activity have been captured in form of case studies and analysed for good practice and viable transfer paths.

This document presents the results of Task 3.2 namely the Case Studies with analysed Good Practice transfer paths for those seeking to adopt them.

1.2. Methodology

Referring to the findings summarised in the IMPAC3T-IP deliverable 3.1, “Report on Technology trends”, the process of IP licensing offers many opportunities for improvement and automation through dedicated tools. They can speed up the overall process, but also be helpful to single tasks and activities carried out by licensing professionals in enterprises and technology transfer officers or researchers in academia.

In Task 3.1 seven key technology clusters were identified, each with significant potential to enhance IP licensing practices:

- Cluster 1: Digital Contracting and Transaction Technologies
- Cluster 2: Data Privacy and Security Technologies
- Cluster 3: Artificial Intelligence and Machine Learning Applications
- Cluster 4: Collaboration and Development Technologies
- Cluster 5: Compliance, Risk Management, and Ethical Technologies
- Cluster 6: Communication and Engagement Technologies
- Cluster 7: Analytical and Decision Support Technologies

For a detailed introduction to the technology clusters please see deliverable D3.1.

The goal of this deliverable was to identify and analyse examples of novel use of technology and delivery methods in licensing activities and to collect illustrative case studies. These case studies have been analysed for good practice and viable transfer paths identified.

The identified case-studies can be categorised into **technologies** that have the potential to support and/or accelerate different forms of licensing activity and **platforms** and other delivery methods that have the potential to improve showcasing of technology and facilitate the execution of deals. Each case study involves one specific (software) tool or platform. The development of the case studies included interaction with the companies offering the tools and, where possible, with end users to identify and develop possible case studies.

For certain case studies, existing case study material provided or already published by the companies were utilised, allowing for a detailed analysis of real-world applications. In such cases, the link to the original case study is provided in the respective case study. For other tools and platforms, new case studies were created by conducting interviews with representatives of the companies behind the software. These interviews provided valuable insights and allowed the IMPAC3T-IP project to construct new, relevant case studies to describe how the tools are being applied in practical, real-world scenarios. In all cases contact was sought with end-users to integrate their point of view and relevant feedback into the case studies. In most cases, contact was successfully established with end-users to integrate their perspectives and feedback into the case studies. However, for three case studies, attempts to reach end-users were unsuccessful as no response was received despite outreach efforts.

The background of information, each case study is based on, is explicitly described at the beginning of each case study.

Case studies have been developed for the following technology clusters and technologies, that have been developed and defined in deliverable report 3.1:

- Cluster 1: Digital Contracting and Transaction Technologies
  - AI-Augmented contract drafting
  - Contract Lifecyle Management (CLM)

    - Electronic Signatures
    - Blockchain and Smart Contracts.
- Cluster 2: Data Privacy and Security Technologies
    - Secure Data Sharing Platforms
- Cluster 3: Artificial Intelligence and Machine Learning Applications
    - Generative AI
- Cluster 4: Collaboration and Development Technologies
    - Virtual collaboration tools
- Cluster 6: Communication and Engagement Technologies
    - Customer Relationship Management (CRM)
- Cluster 7: Analytical and Decision Support Technologies
    - Business Intelligence
    - Market Intelligence and Competitive Analysis Tools

The selection of case studies is not exhaustive, and while many other tools available on the market may be equally relevant, the focus was limited to those included in this report due to practical constraints.

2. Analysed Case Studies

A total of 11 case studies were captured and analysed for good practice and possible transfer paths; these illustrate the use of new technologies and delivery methods. These can be found in the following sections of this chapter.

The positive aspects highlighted in these case studies are intended to provide an illustrative perspective. Not all aspects of each solution have been systematically examined and verified, and these case studies do not substitute for a thorough analysis of the advantages and disadvantages of each tool. Users are encouraged to conduct a detailed assessment before implementing any solution.

2.1. Facilitating the creation and negotiation of IP licensing agreements with Juro

This case study is based on information obtained from desk-based research and through communication with Juro. Interaction with end users was not possible. An attempt was made to reach out, but no response was received.

1. Introduction

Juro is a software tool to create, negotiate, sign, and manage contracts all in one solution. It aims to simplify and automate single steps in the entire contract lifecycle. Juro enables teams to generate contract templates, collaborate on drafts in real time, and expedite the process of negotiation and approval

In this case study, a collaborative game development and publishing company leverages Juro to manage licensing agreements efficiently across multiple studios.

2. Background and Challenges

With numerous studios involved, the company needed a standardised approach to licensing agreements to manage shared assets effectively. Traditional contract management methods created delays and made collaboration difficult, highlighting the need for a unified solution that safeguarded IP rights and expedited contract workflows. Negotiation of such licensing agreements is a time-consuming task, which involves sending numerous e-mails and the interaction of different stakeholders inside different teams of one company.

3. Analysis of Results

The company adopted Juro to centralise licensing agreements. Juro includes a repository for templates, e-signatures, and tracking tools, facilitating negotiations and ensuring version control. All parties were invited to collaborate on a single licensing agreement within the Juro Platform. Teams collaborated directly on documents within the platform, reducing reliance on email exchanges.

The usage of the software tool was initiated by one of the parties and they were able to invite the other parties to the Juro Platform by providing access to the document to leave comments on the draft documents. Real-time updates, commenting features, and automated workflow helped that every stakeholder had visibility and input on critical terms, such as IP ownership, deliverables, and timelines.

The licensing agreements were finalised faster compared to traditional email-based negotiations, with fewer errors and better alignment among all stakeholders. The collaborative features of Juro helped streamline negotiations and ensure that all parties agreed to the terms.

4. Best Practices and Transferability

Employing Juro for negotiation a large number of licensing agreements supported collaboration and transparency across all stakeholders. This approach can be applied in other contracting scenarios as well, e.g. for agreements for research collaborations and Co-creation scenarios that involve multiple stakeholders from various sectors. It can be used inside one

institution to streamline the tasks done by different teams e.g. sales team and legal department.

The tool's transferability across industries is one of its key benefits. It offers flexibility for legal teams in companies as well as in research institutions.

Juro requires a budget to use as it is a commercial tool. The price starts from approximately $10,000 a year, depending on the number of contracts processed and integrations with other platforms.

Limitations in transferability may arise for some institutions also in regard to available language settings. Juro's interface is in English, but its editor supports a wide range of languages and alphabets, and its generative AI features can easily translate between languages. Data is hosted in the EU.

5. Application of technology

Juro offers collaborative contract creation features directly on the platform, workflow management, and automated approval processes including digital signature options. It includes an AI Assistant that can be used for different purposes, e.g. to integrate new claims into the contract based on request of the user. All data transmission between the Juro application and customer endpoints is encrypted using industry-standard transport layer security (TLS) protocol. When data is at rest in Juro, it is encrypted using 256-bit advanced encryption standard (AES).

Referring to the technology clusters listed in section 2.2 of this report, Juro is most applicable to the following clusters and technologies:

- Cluster 1: Digital Contracting and Transaction Technologies, specific technologies: AI-Augmented contract drafting, Contract Lifecyle Management (CLM), Electronic Signatures
- Cluster 2: Data Privacy and Security Technologies, specific technologies: Secure Data Sharing Platforms
- Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technologies, specific technology: generative AI
- Cluster 4: Collaboration and Development Technologies, specific technology: virtual collaboration tools

6. Conclusions and lessons learned

Juro provided a solution for managing a large number of different licensing agreements, reducing delays and improving clarity. It can help optimise and speed up the negotiation of a large number of licensing agreements, supporting the licensing of low-value assets of the Classical+ scenario. For projects with multiple contributors, which are in the focus of IMPAC3T-IP's Co-creation scenario, Juro offers an efficient way to handle complex agreements. Future projects of the same institution could benefit from Juro's automated workflows and the possibility to develop and manage templates to further improve agreement management.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, we can state, that there are tools leveraging generative AI and collaboration features in the market, which can be used to simplify and streamline activities in the field of contract drafting and contract negotiation. There is also evidence that the integration of AI can improve user experience and interaction

2.2. Enhancing University IP Management with GlobalData

This case study is based on information obtained from desk-based research and through communication with GlobalData. To develop this case study, it was refined by further discussions with an end-user from a university Technology Transfer Office (TTO).

1. Introduction

GlobalData PLC is a data analytics and consulting company headquartered in London. GlobalData intelligence solutions support customers across various industries. Their Pharma intelligence platform consolidates extensive datasets, market analyses, and competitive intelligence, providing data to support decisions about licensing, market entry, and growth strategies. GlobalData's analytics tools and market reports allow users to identify trends, assess competitive positioning and understand market dynamics.

In this case study the TTO of a university used the GlobalData platform together with the AI Hub feature to gather market intelligence and support the commercialisation of research and intellectual property (IP) developed at the university.

2. Background and Challenges

Effective commercialisation of IP required access to comprehensive market intelligence, competitor data, and relevant licensing information, yet many TTOs face challenges in gathering and analysing this data efficiently. The TTO needed a reliable platform that could support its market research needs while providing specific insights for decision-making on IP-related partnerships and licensing agreements.

3. Analysis of Results

GlobalData, particularly its pharma and medtech intelligence centers, helped the university TTO gain valuable insights into competitors, clinical trials, licensing opportunities, and market trends. By leveraging these insights, the TTO aimed to streamline its commercialisation process, ensuring that IP assets reach suitable markets efficiently. Using GlobalData, the TTO benefits from a range of features and tools to enhance IP management:

- **Pharma and Medtech Intelligence Centers:** These sections allow the TTO to access in-depth competitor and clinical trial data, as well as licensing and pricing information. This information supports the TTO in assessing the commercial potential of IP assets and identifying possible partners for technology licensing and development.
- **Strategic Intelligence and AI Hub:** New additions to GlobalData, the Strategic Intelligence tool provides curated reports on industry trends, while the AI Hub assists a user in navigating the platform. These tools have enabled the TTO to focus on strategic trends, align university research with market needs. The AI Hub also helps new users to identify key insights more efficiently.
- **Deal Database:** The TTO uses the deal database to benchmark licensing terms and royalty rates, enhancing its ability to set informed terms for IP commercialisation. This database has become essential for aligning the TTO's licensing agreements with industry standards, supporting negotiation processes with potential licensees.

4. Best Practices and Transferability

The case study highlights best practices in IP management, including using GlobalData's curated reports and databases to gather actionable insights efficiently. This approach to leveraging an intelligence platform like GlobalData is transferable to other TTOs and also companies, particularly those in need of market intelligence to make informed commercialisation decisions. The university's experience shows that, despite some data limitations, GlobalData's comprehensive datasets and analytics support a streamlined and strategic approach to IP commercialisation. Despite its utility, GlobalData can pose challenges, particularly with limited data on niche markets such as rare diseases and the difficulty of locating precise licensing terms.

GlobalData works on a subscription model whereby user licenses are allocated to organisations to access the datasets, which means that institutions will need to budget. The price to access GlobalData ranges from 15,000 – 100,000+ GBP, subject to the level of access needed.

Limitations in transferability may arise for some institutions also regarding available language settings. GlobalData has the following language capabilities: Arabic, Chinese (simplified), Chinese (traditional), Czech, Danish, Dutch, English, Filipino, French, German, Greek, Hindi, Hungarian, Icelandic, Indonesian, Italian, Japanese, Korean, Malay, Norwegian, Persian, Polish, Portuguese (Brazil), Romanian, Russian, Serbian, Spanish, Swedish, Telegu, Thai, Turkish, Ukrainian, Vietnamese.

5. Application of Technology

GlobalData's AI Hub provides data-driven recommendations and supports users in navigating complex datasets, making it easier to identify relevant market intelligence and strategic trends. The platform's structured intelligence tools foster collaboration by providing insights that aid in the selection of commercialisation partners and facilitate licensing agreements. GlobalData's curated reports and analytical insights also assist in preparing data-driven presentations for discussions with potential investors and partners.

Referring to the technology clusters listed in section 2.2 of this report, GlobalData is most applicable to the following clusters and technologies:

Cluster 7: Analytical and Decision Support Technologies, specific technologies: Business Intelligence, Market Intelligence and Competitive Analysis Tools

Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technology: Generative AI

6. Conclusions

The GlobalData platform has proven to be a valuable tool for the university's TTO, helping the office save time, improve decision-making, and support commercialisation. While not specifically designed to manage or market IP assets directly, GlobalData's intelligence capabilities allow the TTO to make informed decisions, engage potential partners with confidence, and align research with market needs. For TTOs aiming to enhance their IP management processes, GlobalData offers insights that support both the strategic evaluation of IP and the execution of commercialisation agreements. Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, we can note, that existing tools such as GlobalData can simplify the time-consuming activity of market research, which can be particularly relevant for strategic decisions that need to be made in collaborative projects (Co-Creation scenario).

2.3. Leveraging Tradespace to Identify Licensing Partners

This case study is based on information obtained by desk-based research, by communication with Tradespace, and feedback from the end user Zucker Institute for Innovation Commercialisation.

1. Introduction

Tradespace offers a data-driven platform with a module that aims to assist companies in identifying potential licensing partners by analysing evidence of use, investment priorities, and business models. In addition, it suggests strategies for licensing, key messaging, and provides contact details for potential partners. Feedback from the Zucker Institute for Innovation Commercialisation highlights Tradespace as a valuable starting point for preliminary evaluations, streamlining the otherwise time-intensive process of identifying potential partners.

2. Background and Challenges

Companies looking to commercialise innovative technologies often face challenges in efficiently assessing market opportunities and identifying aligned licensing partners. Traditionally, this process required significant manual research and relied heavily on personal networks, leading to delays and inefficiencies.

Before adopting Tradespace, the Zucker Institute encountered similar challenges. Their manual research process for evaluating new ideas was time-intensive, delaying action on promising opportunities. Tradespace has improved this by enabling quick, preliminary evaluations in minutes, providing licensing managers with a solid foundation to begin assessing technologies and identifying potential partners.

3. Analysis of Results

Tradespace's ability to process and present structured insights from various sources has been valuable for the Zucker Institute. Key features, such as identifying market adjacencies, aggregating competitive insights, and flagging potential licensees, provided their team with a comprehensive view of the IP landscape. While they do not exclusively use Tradespace to identify licensing partners, it serves as a valuable tool for initial outreach and early-stage decision-making.

The Zucker Institute noted that their idea triage process has become more efficient with Tradespace. The operational improvements have made them more effective, allowing them to provide greater value to their inventors and stakeholders.

4. Best Practices and Transferability

The effectiveness of Tradespace depends on how its features are utilised by users, such as regularly updating and refining search criteria to focus on relevant partners. The platform's suggested messaging templates and licensing strategies also helped streamline communication, though results varied depending on how closely the template matched the specific needs of each negotiation.

The tool's transferability across industries is one of its key benefits. It offers flexibility for companies with innovative technologies in diverse sectors, from healthcare to manufacturing, looking to scale through licensing. While this adaptability makes Tradespace a versatile option for various industries, its value relies on how companies fine-tune their use of the platform. For instance, the messaging templates could be useful, but could require customisation to reflect the nuances of different industries and products.

Tradespace requires a budget to use as it is a commercial tool. Prices start at $500 per month. Limitations in transferability may arise for some institutions also in regard to available language settings. Tradespace is currently limited to English language for its user interface but can generate marketing materials in any language.

5. Application of technology

Tradespace combines **data analytics** with **business intelligence** to identify licensing partners based on several factors:

- **Evidence of use**: Indicating companies with a demonstrated interest or history in the technology.
- **Investment history**: Identifying partners with strategic alignment based on their investment patterns.
- **Business models**: Matching potential partners that operate with business models conducive to licensing arrangements.

The platform also provides **licensing strategy recommendations and messaging templates to facilitate outreach efforts.** These resources have the potential to save time, but they are only as effective as the user's ability to customise them for their specific industry needs. While Tradespace offers AI-powered tools for content generation (such as marketing materials), their applicability depends on how well they resonate with the target audience. Some users noted that the AI-generated content sometimes needed further refinement for professional communication.

Referring to the technology clusters listed in section 2.2 of this report, Tradespace is applicable to the following clusters and technologies:

Cluster 7: Analytical and Decision Support Technologies, specific technologies: Business Intelligence, Market Intelligence and Competitive Analysis Tools

Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technology: Generative AI

6. Conclusions and lessons learned

Tradespace can be valuable in streamlining the identification of licensing partners and providing a structured roadmap for negotiations. The platform's evidence-based insights allowed the company to make more informed decisions, helping them secure licensing agreements. The lessons learned from this case include the importance of regularly refining search criteria and tailoring suggested licensing strategies to meet specific negotiation needs.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, we can note, that existing tools can simplify the time-consuming activity of identification of potential licensees. This can be particularly relevant for the Classical+ and Crisis Scenarios.

2.4. Creation of Industry partnerships with FirstIgnite

This case study is based itself on a corresponding case study, which is published on FirstIgnite's website (https://firstignite.com/washu-case-study). For this case study the original was refined by further discussions with David Melie, Head of Partnerships at FirstIgnite and with a representative of Washington University (WashU) in St. Louis as an end-user.

1. Introduction

FirstIgnite is a platform designed to assist universities, research institutions, and organisations in identifying industry partners. The platform support collaborations, research outreach, and grant applications by connecting academic projects with relevant industries.

In this case study, WashU utilised FirstIgnite's expertise and networking tools to identify critical industry collaborators.

2. Background and Challenges

WashU faced challenges in finding niche industry partners for synthetic biology, chemical sensing, and decarbonised manufacturing research. However, the process of identifying and engaging suitable partners was complex, time-intensive, and required specialised support to achieve timely connections. These collaborations were essential not only for securing grants but also for gaining insights from industry experts and aligning research objectives with market demands.

3. Analysis of Results

With FirstIgnite's software, WashU was able to identify over 40 relevant companies, providing industry feedback to support their NSF (National Science Foundation) Convergence Accelerator Grant application. This led to the successful securing of a $26 million NSF grant for decarbonised biomanufacturing, the largest in the history of the WashU Engineering Department. Furthermore, FirstIgnite helped WashU launch a 16-member advisory board in synthetic biomanufacturing. This strengthens WashU's position, making it more competitive for future grant opportunities and strategic partnerships.

4. Best Practices and Transferability

WashU using the FirstIgnite platform demonstrates a practical approach for universities seeking industry connections to support high-impact research. Leveraging FirstIgnite's platform allowed WashU to streamline outreach and secure necessary support faster than traditional methods. This model can be readily applied across academic institutions that require industry feedback and partnerships to strengthen their research projects, particularly in fields where industry insights are critical for grant success and research commercialisation.

FirstIgnite requires a budget to use as it is a commercial tool. Prices are provided on an enterprise basis to entire offices, meaning that all team members have access to the software. These prices can fluctuate based on the total number of people within an office.

Limitations in transferability may arise for some institutions also regarding available language settings. While inputs into FirstIgnite can be provided in any language, all outputs will be provided back the user in English.

FirstIgnite supports business globally, so the geographical scope in finding industry partners is not limited.

Insights from the User Perspective: Interview with WashU in St. Louis

In an interview discussing WashU's use of FirstIgnite, Kelli Delfosse, who manages industry relations for the School of Engineering, highlighted the platform's value in building research partnerships and supporting grant applications. FirstIgnite, an AI-powered tool, has been instrumental in helping the university identify industry partners, particularly small to medium-sized companies (SMEs), that align with specific engineering research needs. Kelli explained that the platform's AI capabilities allow it to generate targeted lists of companies, industries, and key personnel based on research abstracts or concept papers. This functionality was critical in securing industry support for a $26 million NSF decarbonisation grant and in establishing an advisory board for synthetic biology, with approximately 25% of new industry partners sourced through FirstIgnite contacts.

The platform's ease of use and user-friendly interface were praised by Kelli, who noted that its ability to produce shareable, visually appealing reports enhances collaborative efforts and complements existing industry relationships. Additionally, FirstIgnite's software with its AI generated text, has supported the university's marketing team by transforming technical language into content accessible to a broader audience, making it a versatile tool for multiple departments. While it does not replace traditional relationship-building, Kelli emphasised that FirstIgnite effectively complements these efforts. The main limitation mentioned was the occasional lack of direct email contacts, though this is generally manageable. Overall, FirstIgnite's software has significantly enhanced WashU's ability to engage with industry partners, streamline research collaborations, and align research outputs with market needs.

5. Application of Technology

FirstIgnite offers a platform for building strategic industry partnerships. It uses data-driven insights and a network of connections to identify key companies and experts relevant to specific research areas. It is designed to help streamline outreach and engagement with industry partners, supporting institutions like WashU to communicate effectively with potential collaborators and gather industry feedback, using features like generative AI to draft emails and technology descriptions for individually targeted communication with potential partners.

Referring to the technology clusters listed in section 2.2 of this report, FirstIgnite is applicable to the following clusters and technologies:

Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technology: generative AI

Cluster 6: Communication and Engagement Technologies, specific technology: Customer Relationship Management (CRM).

6. Conclusion and lessons learned

The partnership between WashU and FirstIgnite demonstrates how academic institutions can use external platforms to secure funding and industry connections. By facilitating targeted

industry outreach, FirstIgnite enabled WashU to enhance its research, win substantial grants, and position itself as a leader in synthetic bio-manufacturing and decarbonised manufacturing. This case shows the value of integrating academic expertise with industry partnerships to drive innovation and research impact.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, we can note, that existing tools can simplify the time-consuming activity of identification of potential partners for collaborations, relevant for the Co-creation scenario, or potential licensees, relevant for scenarios Classical+ and Crisis).

The integration of AI for better usability and interaction with the user as well as facilitating time-consuming tasks is one of the key elements of success for this solution.

For more information see: www.firstignite.com

2.5. Optimising IP Management and Industry Engagement with Wellspring's Scout Analytics

This case study is based on information obtained from desk-based research and through communication with Wellspring. The end-user perspective was integrated by feedback from a university technology transfer officer.

1. Introduction

Scout Analytics by Wellspring is an AI-powered IP management and analytics platform designed to help research institutions identify potential licensees, explore collaborative partnerships, and gain insights into market trends. As a central component of Wellspring's innovation management suite, Scout complements other solutions offered by Wellspring like Sophia, which focuses on IP cataloguing and compliance, and Flintbox, a marketplace for showcasing academic technologies. Together, these tools support research institutions in managing, promoting, and commercialising their intellectual property (IP) assets. However, Scout's advanced analytics and search capabilities aim to connect academic research with industry needs by identifying partners for licensing and research collaborations.

2. Background and Challenges

Research institutions and universities often struggle to manage their IP portfolios effectively. Challenges include finding potential licensees, understanding market relevance, and building partnerships. Limited access to reliable market data and fragmented innovation networks make it harder to promote IP and connect with industry partners. These tasks can be time-consuming, with manual processes for evaluating IP and tracking trends slowing down commercialisation efforts.

3. Analysis of Results

Scout Analytics can help research institutions to enhance their IP management and commercialisation efforts by leveraging the following capabilities:

- **Finding Potential Licensees:** Scout's federated search engine aggregates data from over 400 million records across 2,000 public and proprietary databases, covering diverse IP categories. This allows institutions to identify companies whose needs may align with specific technologies in their IP portfolios. With targeted search filters by industry, IP type, or market sector, users can create lists of potential licensees likely to engage in licensing discussions.
- **Supporting Licensee Outreach:** By using Scout to categorise contacts based on their roles and relevance to specific technologies, TTOs can identify and connect with key decision-makers within organisations. This feature enables institutions to prioritise relevant contacts for more focused outreach efforts
- **Visualising Collaboration Networks:** Scout's ability to map and analyse network relationships helps institutions find research and development partners across the innovation ecosystem. By identifying active players in relevant technology spaces, Scout users can visualise how prospective partners connect within their fields, helping institutions identify potential collaboration opportunities. This feature aims at universities looking to

form research consortia or advisory boards, as it can help them to locate complementary expertise and build collaborative networks.

- **Providing Market Intelligence:** In addition to partner identification, Scout's AI-driven insights provide market intelligence on emerging trends and industry needs, helping institutions to align their IP with current market needs. For example, Scout users can review public and private funding data, monitor investments in specific technology areas, and assess whether a field is trending toward industry or academia, aiding strategic decision-making.

4. Best Practices and Transferability

Using Scout for IP management and commercialisation demonstrates approaches that research institutions could adopt. By centralising data, automating partner discovery, and providing actionable insights, Scout assists institutions in managing IP commercialisation efforts and developing outreach strategies for engaging industry partners.

User feedback indicated that the tool is easy to adopt, noting the availability of demo sessions and user manuals that facilitate on-boarding. Additionally, the feedback suggested that the tool may be more effective for identifying global or US-based partners, with potential adjustments needed for more region-specific applications.

This approach is transferable across academic institutions, especially those aiming to improve their engagement with industry for research and licensing purposes. Nevertheless, institutions should consider how the tool aligns with their specific regional and strategic needs.

Limitations in transferability may arise for some institutions as Scout is a commercial tool. Prices start from €5,000 per year. Other limitations may arise in regard to available language settings, as Scout is currently limited to the English Language.

5. Application of Technology

Scout is using AI to automatically analyse information about technology areas, organisations and experts. Scout's network visualisation and relationship-mapping capabilities aim at fostering collaboration by highlighting promising R&D partners, aligning with institutional objectives for research development. The search and data categorisation supports improved communication and outreach by enabling institutions to target relevant contacts.

Referring to the technology clusters listed in section 2.2 of this report, Scout is applicable to the following clusters and technologies:

Cluster 7: Analytical and Decision Support Technologies, specific technologies: Market Intelligence and Competitive Analysis Tools

Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technology: Generative AI

Supporting Platforms:

While Scout is the focal platform for IP management and commercialisation, Sophia aids in cataloguing and managing IP portfolios. Flintbox complements this by offering a marketplace, allowing institutions to promote IP assets to a wider audience and increase visibility.

6. Conclusions

In this case study, Scout Analytics provides features that research institutions can use to improve IP commercialisation and explore industry partnerships. Its AI-driven features support the identification of potential licensees and collaborators while offering market insights. Together with Sophia and Flintbox, Scout helps institutions enhance the reach of their IP assets, strengthen industry engagement, and support innovation through effective technology transfer efforts.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, it can be stated, that tools like Wellspring's AI-powered Scout, can support the time-consuming process of identifying potential licensees or collaboration partners and offer data for strategic decisions in product development. This may be relevant for the Classical+, Co-creation and Crisis Scenario.

2.6. Accelerating Freedom-to-Operate Studies using IPRally

This case study is based itself on a corresponding case study, which is published on IPRally's website: https://www.iprally.com/case-studies/how-ypsomed-spends-50-less-time-on-fto-studies-thanks-to-iprally

For this report it was refined by further discussions with IPRally and with patent expert Vinzenz Frauchiger, PhD, at Ypsomed as an end-user.

1. Introduction

IPRally is an AI-powered platform for patent search, review, monitoring and portfolio analysis. It aims at enhancing efficiency in tasks like prior art and freedom-to-operate (FTO) studies and invalidity searches. IPRally uses a knowledge graph approach to provide accurate and relevant results and offers an integrated AI assistant for enhanced usability.

In this case study, Ypsomed, a leading Swiss medical technology company, used IPRally to reduce the time spent on FTO studies.

2. Background and Challenges

Ypsomed required prior art searches for FTO studies in the context of product launches. Because the company operates in the field of medical technology, where a high volume of patents is filed each year, prior art searches usually result in high numbers of documents, which have to be analysed. In this sector, innovations often overlap in functionality and technique, which leads to an increased likelihood of existing patents covering similar ideas or methods. The previous usage of a traditional Boolean tool was time-consuming and often returned a large number of non-relevant results.

3. Analysis of Results

Ypsomed implemented the tool alongside its traditional Boolean system, finding faster and more relevant results. By this, the time needed for prior-art-search was reduced by 50%, allowing the team to focus on high-value search and therefore speeding up FTO analyses. The tool also helped filter out irrelevant patents more efficiently, with a notable reduction in noise compared to previous methods. The AI-powered review assistant "Ask AI" of IPRally was used to improve search efficiency by reducing irrelevant results and providing faster insights into prior art by analysing search results for specific technical aspects. Although this feature makes work much easier, hallucinations (incidents where the AI model generates incorrect or misleading information), cannot be completely avoided even with this advanced technology, so human expertise is still required in the further course of the process. The presentation of the results is designed to make the search results as comprehensible and transparent as possible to avoid a pure black-box search, where conclusions are provided without clarity on how they were derived.

4. Best Practices and Transferability

The approach of leveraging IPRally to prioritise critical search results and reduce time spent on non-essential data, as well as using the AI-generated insights to focus more on substantive patent analysis, is especially adaptable across industries with high patent filing volumes, such

as Digital Communication, Medical Technology, Computer Technology and Electrical Machinery, which are requiring thorough prior art searches. The tool supports prior art searches for both patentability and freedom-to-operate analyses. It can be used as a standalone or to complement others tools, as it is able to interact with other systems. It covers about 110 million patent applications and grant publications from several countries worldwide.

Limitations in transferability may arise in regard to the language of the user interface, which is available in English only. However, in IPRally's AI Assistant it is possible to ask questions and receive answers in any language.

IPRally is a commercial tool and a license must be purchased to use the software. Current prices can be found on the company's website.

5. Application of technology

IPRally's software offers the option for free text search and a knowledge graph approach to perform context-driven searches. It includes an AI Assistant "Ask AI" that can be used for multiple purposes, e.g. to analyse or compare documents or claims that have been found in the research by entering simple questions. IPRally uses an AI model especially trained to be safe, accurate, and secure and to reduce hallucination in the AI-Assistant's answers.

Referring to the technology clusters listed in section 2.2 of this report, technologies used in IPRally is most applicable to Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technologies: Generative AI.

6. Conclusions and lessons learned

IPRally provided a tool to speed up Freedom-to-Operate analysis. For complex technical collaboration projects, of the type which can occur in IMPAC3T-IP's Co-creation scenario, IPRally could offer a time-efficient way to aid decision-making in R&D about technical, IP-related questions and it delivers useful information for protecting IP resulting from collaboration projects. Additionally, IPRally can support licensing decisions by offering better insights into the uniqueness of the IP and neighbouring patents.

2.7. PQAI, Open-Source Solution for Time-efficient and Effective Novelty Analysis

This case study is based on information obtained from desk-based research and through communications with PQAI. Feedback from the end-user perspective was integrated by means of a conversation with a managing director of a company that uses the solution.

1. Introduction

PQAI is an open-source project offering a search engine that uses AI to support prior-art identification. It is currently limited to the US patent space.

2. Background and Challenges

Conducting prior-art searches often demands expertise in patents and specialised search techniques. It is also a generally slow and effort intensive process. Individual inventors often face these challenges when they're trying to ascertain the originality of their invention.

The PQAI initiative was started with the aim to use AI to build a user-friendly search tool that anyone can use to find prior technical work relevant to their area of interest. It enables users to search patents with queries written in plain English. The tool is usable by both - professional analysts and individual inventors.

3. Analysis of Results

A company, interested in securing patents in their area, used the PQAI tool to assess their inventions. The tool assisted in identifying prior-art, clarifying which aspects of the invention were novel, and they drafted their patent application around those features. As a result, they were able to obtain approval from the patent office while avoiding rejection of their application. The analysis was done in less than an hour.

4. Best Practices and Transferability

A key lesson learned from the use case is the ability to reduce the effort for an effective prior-art search. Though, the prior-art search, at the moment, is limited to the United States of America.

The results can be transferred to any related invention, independently of a later patent filing. This flexibility ensures applicability across various industries and research fields. Additionally, the tool is accessible to a broad range of users, including researchers, legal teams, and inventors, as a basic version of the tool is freely available, with additional features offered under a subscription model

Expanding the scope to include European patents and ensuring compliance with the General Data Protection Regulation (GDPR) would address concerns around data privacy and patent coverage, and thereby add to the attractiveness of the tool to users in the European context.

5. Application of technology

PQAI employs AI technology, specifically, large language models (LLMs) to interpret user inputs and match them to existing patents in a patent database. The source code for PQAI, written in Python, is accessible on GitHub. PQAI can be integrated into other software platforms through API (Application Programming Interface) integration. User feedback highlights that the API is well-documented and easily accessible for Python integration. It also provides detailed information, including individual claims, which is particularly valuable for users. Additionally, obtaining an API token is straightforward and typically completed within a few days, as described on the PQAI website.

Referring to the technology clusters listed in section 2.2 of this report, technologies used in IPRally is most applicable to Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technologies: Generative AI.

6. Conclusions and lessons learned

PQAI is a quick and easy to use solution for making novelty analysis of inventions more time-efficient and comprehensive. In collaboration projects with a technical focus, such as those in IMPAC3T-IP's Co-creation scenario, PQAI can provide researchers, developers and IP professionals a time and cost-efficient way to support decision-making in R&D on technical and IP-related issues, delivering valuable information for safeguarding IP generated through collaboration projects. Additionally, PQAI can aid licensing decisions by offering deeper insights into the uniqueness of the IP and surrounding patents. However, at the moment, the tool is limited to USA IP intelligence.

2.8. Novelty Analysis, Patent Valuation and Licensee Identification with Patsnap

This case study is based on information obtained by desk-based research and by communication with Patsnap. Interaction with end users was not possible. An attempt was made to reach out, but no response was received

1. Introduction

Patsnap is a software tool designed to support IP and R&D teams in managing intellectual property through functions like novelty analysis, patent valuation, and licensee identification.

In this case study, Patsnap was used by a research institution to improve the accuracy and efficiency of these processes, with access to extensive patent data and a global database of licensing agreements.

2. Background and Challenges

The research institution needed a tool to support novelty analysis, patent valuation, and licensee identification. Conducting a novelty analysis is typically time-consuming, requiring a thorough search of prior art, including patents, scientific publications, and other relevant literature, to ensure that no existing technology or disclosure overlaps with the invention in question. The challenge is not only to identify directly related documents but also those that might be tangentially or indirectly relevant, which requires both technical and legal expertise. Furthermore, determining patent value is a complex task. Valuation depends on factors such as the invention's uniqueness, commercial potential, enforceability and identifying the right licensee capable of capitalising on the patent. The valuation process also involves legal considerations, such as the patent's geographical scope and the strength of its claims, making it a multi-faceted and often time-consuming process that demands both technological insight and market analysis.

3. Analysis of Results

Using Patsnap's software solution with its advanced search capabilities enabled the institution to conduct novelty analyses more efficiently. Using automated search tools to scan extensive patent databases and related literature reduced the need of manual work and improved the accuracy of novelty analyses. Patsnap also enhanced the institution's efforts to identify potential licensees by using market intelligence tools, which broadened the pool of candidates to include players in emerging and niche sectors. Patsnap was also used to assign values to patents, by using Data-Driven Patent Valuation with access to historical patent data, market trends, and licensing records.

4. Best Practices and Transferability

Best practices from this case study include the use of automated search tools to increase efficiency, the use of a data-driven approach to IP valuation and the utilisation of market intelligence tools to identify licensees.

While the case study focuses on a research institution, these best practices can be applied across different sectors, from universities to corporate R&D teams, and startups, to large corporations with extensive patent portfolios. The ability to streamline patent-related processes, assess patent value more accurately, and strategically identify licensees is universally applicable and can help to enhance commercialisation outcomes.

Limitations in transferability may arise for some institutions as Patsnap is a commercial tool. Prices vary for annual contracts, depending on specific tools required, number of users, and access levels. Other limitations may arise in regard to available language settings, as Patsnap's user interface is limited to English, Chinese and Japanese.

5. Application of Technology

Patsnap leverages AI to analyse inventions or ideas for novelty, identify similar patents for novelty analysis and pinpoint relevant license deals and potential licensees. The platform enables collaborative discussion of results to enhance teamwork across departments. Patsnap covers over 193 million global patent data sources and a transfer database with licensing agreements in 66 countries. The domain-specific LLM is trained on proprietary innovation data. Coupled with Hiro, Patsnap's AI assistant, it can help generate insights that can improve productivity in IP-related tasks.

Patsnap's valuation methodology is based on more than 80 indicators, drawing on external research and Patsnap's expertise to assess factors like economic impact, technology strength, strategic value, market potential, competitive advantage, and legal robustness.

Referring to the technology clusters listed in section 2.2 of this report, Patsnap is most applicable to the following clusters and technologies:

Cluster 3: Artificial Intelligence and Machine Learning Applications, specific technology: generative AI

Cluster 7: Analytical and Decision Support Technologies, specific technologies: Market Intelligence and Competitive Analysis Tools

6. Conclusions and lessons learned

Patsnap provided a solution that supports multiple IP-related activities, addressing the needs for efficient novelty analysis, patent valuation, and licensee identification. The AI-driven approach enabled improving the results while reducing manual search efforts. Its valuation tools offered a data-supported approach to support patent valuation. Additionally, Patsnap's licensee identification features helped expand the pool of potential licensees.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, it can be noted, that existing tools can support activities like novelty analysis, patent valuation and licensee identification. This can be particularly relevant for the Co-Creation and Crisis Scenarios.

2.9. Leveraging Blockchain to empower artists and support charities through verified art sales

This case study is based on information obtained from desk-based research and through communication with Verisart, including its CEO. Interaction with end users was not possible. Several artists who have used the platform were contacted without response.

1. Introduction

Verisart launched its Fair Trade Art initiative with the goal of improving transparency and encouraging ethical practices within the art market, as well as providing artists with the opportunity to contribute to social causes. Through this program, artists are able to directly contribute to charities or causes they believe in, with the aim to verify that both the artist and the nominated cause will benefit financially from the sale of the artwork. Using blockchain technology, Verisart provides Fair Trade Art Certificates, which seek to provide assurance to both collectors and artists that proceeds are distributed fairly and ethically.

These certificates are part of Verisart's broader effort to promote trust in the art world by recording immutable, verifiable histories of artworks and ensuring that artists maintain control over how their works are certified and sold.

The initiative responds to the growing interest among collectors and art buyers for more transparency, as well as the need for more direct ways to engage in social responsibility. By creating a structure that links the sale of art to positive social impact, Verisart addresses the rising interest in purchasing products that align with ethical values, where buyers are not just purchasing art, but also supporting causes they care about.

2. Background and Challenge

The art market has historically been opaque, particularly regarding provenance and ownership. For centuries, verifying the authenticity of artworks has been plagued by fraudulent practices, unclear ownership records, and a lack of consistent standards. Buyers and collectors often face uncertainty when acquiring artworks, not knowing whether the piece is authentic, stolen, or properly attributed to the artist. This lack of transparency not only affects the value of the art but also undermines trust in the market as a whole.

Verisart's Fair Trade Art initiative aimed to address these long-standing challenges by introducing blockchain technology to create permanent, verifiable records of an artwork's provenance. The goal was to bring confidence to buyers while empowering artists to take control of their work's certification and the subsequent sale. In addition, the initiative introduced a new dimension – social impact – by allowing artists to designate a portion of their sales to a cause or charity. This added benefit allowed Verisart to differentiate itself from traditional provenance verification methods by intertwining ethical trade with transparency.

The initiative also gives artists more control over the certification process. Unlike traditional methods where galleries or third parties control provenance authentication, Verisart's system enables artists to have direct involvement in verifying their own works.

3. Analysis of Results

The Fair Trade Art initiative has the potential to influence how both artists and collectors view the sale and certification of artworks. By providing blockchain-registered certificates, Verisart aims to increase buyer confidence by ensuring that each artwork has an immutable record of provenance. This could help reduce the risk of fraud and forgeries, which have been pervasive problems in the art market for centuries.

More importantly, the initiative provides artists with more control over how their works are certified and sold, while buyers can feel confident that their purchases are both authentic and socially responsible. For example, through the program, artists such as Helga Stenzel, Sougwen Chung, and Shepard Fairey have created works where proceeds support meaningful causes. These artists have leveraged their Fair Trade Art certificates to guarantee that portions of the sales go directly to social impact organisations. While Verisart doesn't focus on commercial gain for this initiative, the program has provided a platform for artists to engage more meaningfully with their communities and causes.

Additionally, collectors benefit from this initiative by knowing that their purchase not only supports the artist but also contributes to a cause. This dual-purpose buying model can increase the emotional connection between the buyer and the artwork, making it more than just a financial transaction. For example, when Shepard Fairey sold works certified under Fair Trade Art, his buyers knew that their investment also contributed to positive social change, adding another layer of value to their purchase.

Although Verisart does not emphasise the financial impact of the initiative, feedback from both artists and buyers indicates that the increased transparency and social responsibility have strengthened the trust between them. This model of certification is evolving the art market into one where ethical considerations and transparency are becoming as important as aesthetic and monetary value.

4. Best Practices and Transferability

Verisart's approach to using blockchain for art certification offers a replicable model that could be applied across other industries dealing with high-value or collectible goods. By creating transparent, immutable certificates that trace the ownership and provenance of an item, the system provides a level of security and trust that is difficult to achieve with traditional methods.

The Fair Trade Art certificates are an example of how blockchain can be used to merge ethical consumerism with transparency. Other industries, such as luxury goods, rare collectibles, and even historical artifacts, could benefit from similar systems. In these sectors, counterfeit goods and fraudulent claims about the history or ownership of items are common, and a blockchain-based solution could provide the same benefits as it does for art. For example, luxury fashion brands could use blockchain to prove the authenticity of their goods while also incorporating a social impact component, where a portion of proceeds from high-end items goes to charitable causes.

Furthermore, Verisart's model of artist-driven certification can inspire other industries to rethink how creators and producers interact with consumers. By giving creators control over their product's certification, it provides them with more influence over how their work is perceived and valued in the market.

However, while this system offers significant benefits, there could be certain barriers to widespread adoption. Some users may face technical challenges when engaging with the

platform, particularly if they are unfamiliar with digital wallets, cryptocurrency, or blockchain protocols. Artists and collectors who are less tech-savvy might find it difficult to navigate the process of creating and managing blockchain certificates, which could prevent them from fully adopting the platform.

Trust in digital certificates remains a concern for some, as buyers and collectors may still prefer physical certificates or traditional authentication methods. Despite blockchain's ability to provide secure and permanent records, some users may be hesitant to rely on digital certificates, fearing that they lack the tangibility of paper-based systems.

Finally, resistance to change in traditional markets is another barrier. The art market, in particular, is known for its conservative approach, and many artists, galleries, and collectors may be slow to adopt new technologies, especially those unfamiliar with blockchain. Educational efforts and clear communication about the benefits of the platform will be essential to overcoming this resistance and encouraging broader adoption.

Verisart offers a range of pricing plans. The Starter plan is free with limited features, while the Growth plan costs $29.99 per month for professionals, and the Pro plan at $99.99 per month includes additional options for businesses. Prices vary based on the level of features, such as certificate limits, NFT minting capabilities, and integration with Shopify and WooCommerce. At present, the Fair Trade Art certification is available to users on the Growth and Pro plans upon request, without incurring additional fees. Artists or charitable organisations typically seek this certification when preparing for a sale or auction.

The platform supports multiple languages. Verisart stores text in UTF-8 format, allowing for accurate representation of content across different languages, and enhancing accessibility for users worldwide. This ensures that artists, collectors, and organisations from various regions can seamlessly interact with the system.

5. Application of Technology

Verisart uses the Bitcoin blockchain (via OpenTimestamps) to create permanent, publicly verifiable records for each artwork. This blockchain technology offers artists and buyers a secure way to certify the authenticity and provenance of an artwork. Each certificate contains cryptographically signed information that is timestamped on the Bitcoin blockchain, ensuring that it cannot be altered. This guarantees that the entire lifecycle of an artwork, from its creation to changes in ownership, is recorded transparently.

Verisart aims to offer secure solutions to connect physical works or certificates with their digital counterparts. Holographic paper stickers are provided, featuring unique serial numbers and QR codes that are linked to the digital certificate and the item's provenance. This process facilitates the verification and tracking of the artwork, ensuring that both physical and digital records remain consistent and easily traceable.

The certification technology allows certificates to change status based on the consensus of issuing authorities. In the case of Fair Trade Art certification, this requires the endorsement or confirmation of a charity to verify that proceeds from a sale are allocated to support that charity.

The certificates include detailed metadata, such as the artwork's title, medium, and date of creation, as well as digital signatures from the artist and any verified issuers or owners. This data is linked to the artwork's file and securely stored, giving collectors and buyers an irrefutable record of its authenticity.

Referring to the technology clusters listed in section 2.2 of this report, Verisart is applicable to cluster 1: Digital Contracting and Transaction Technologies, specific technologies: Blockchain and Smart Contracts.

Although Fair Trade Art does not rely on smart contracts, Verisart does incorporate them into its NFT minting services. Artists can set up royalties for secondary sales of their NFTs, ensuring they continue to receive compensation when their digital works are resold. Verisart gives artists the flexibility to import or create their own smart contracts for these purposes, allowing them to customise their royalty structures and rights management.

By using blockchain's decentralised ledger, Verisart aims at creating an evidentiary platform that holds central authorities accountable. This platform allows central authorities to demonstrate adherence to timelines and ensures that documents remain unaltered and verifiable.

6. Conclusions

The Fair Trade Art initiative addresses challenges in the art market, including transparency, fraud, and lack of trust between artists, buyers, and galleries. Through the use of blockchain technology, Verisart offers a secure and immutable system for recording the provenance of artworks. In addition, by linking the sale of art to social causes, the initiative provides an ethical dimension that is highly appealing to both artists and collectors who are concerned about social responsibility.

Verisart's approach could be applied across various industries dealing with valuable goods, offering new ways to certify products while ensuring their authenticity and ethical impact. As the demand for transparency, fairness, and ethical practices continues to rise, Verisart's model could serve as a blueprint for future applications of blockchain technology in the art world and beyond.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box, it can be stated, that tools like Verisart can be particularly relevant for the Classical+ Scenario in the specific field of Arts.

2.10. Using the e-lucid platform to streamline and future-proof Licensing Cambridge Enterprise's Research Tools Portfolio

This case study is based on information provided by E-lucid Solutions Ltd. The end-user-perspective has been integrated by an interview with an Associate Director at Cambridge Enterprise. We would like to point out, that E-lucid Solutions Ltd itself is part of the IMPAC3T-IP consortium.

1. Introduction

e-lucid is an online platform for showcasing and transacting intellectual property assets in support of non-exclusive licensing activity.

The platform was developed within UCL Business, the commercialisation company of University College London (UCL) and its partner NHS (National Health Service) Trusts, to meet the challenges posed by the management of contracts for low-cost, high-volume IP assets. Whilst originally aimed at universities and research institutions, it is suitable to any organisation that engages in non-exclusive licensing activity.

In this case study we examine how Cambridge Enterprise (the innovation arm of the University of Cambridge) uses the e-lucid platform to licence its research tools portfolio. Such tools include software, research reagents (cell lines, monoclonal hybridomas, small molecules) and questionnaires.

2. Background and Challenges

Cambridge Enterprise faced challenges in streamlining the licensing processes within the Research Tools team where the number of licenses were growing. Despite this part of the organisation seeing a high throughput of licences, each agreement was very time-intensive.

The main factors causing the bottleneck were the multiple internal manual steps of the licensing process, large numbers of free-of-charge licences for a particular product (mandated by funder requirements) and a tendency for licensees to engage in long negotiations even for low value licences.

In addition, there was the future challenge of growing and future proofing the Research Tools business without further increasing staff numbers. As it stood, scaling licence numbers & revenue using the existing systems was not feasible.

3. Analysis of Results

The e-lucid platform enabled Cambridge Enterprise to transact a third of all of its Research Tools licences online (approximately 100 licences in the last 12 months) and this is set to increase over time.

By presenting terms as 'take-it-or-leave-it' licenses, negotiation on free-of-charge and low-value licences has been eliminated. There has been no pushback at all on licence terms, with licensees simply accepting the terms - even for those agreements where previously negotiation would have been expected.

The internal process has been streamlined to the extent that the only manual step that Cambridge Enterprise now need to take during licensing is due diligence of prospective licensees. Checking that anyone requesting a licence is who they say they are and taking into account export controls etc. will always be a necessary step. This has also led to an improved user experience as the process is clearer and more streamlined.

Both of these factors have introduced significant time saving into Research Tools operations and there have been other, broader, impacts for the team.

Firstly, as a result of the time saving benefits of the platform, staff time has been freed to work on other more complicated, higher value, license deals that are not suitable for processing via the online platform.

In addition, improved search engine optimisation allows for better product promotion and improved user experience. Licensees can easily reach the relevant product pages simply via a Google search for the required technology instead of navigating via the Cambridge Enterprise homepage.

An unexpected benefit of the e-lucid platform is that it has helped to demystify licensing and commercialisation activity within the University of Cambridge. Discussions with new academics often reveal a lack of understanding of this area of activity but people understand what it means to buy things on the internet and to 'click through' licence terms, so e-lucid provides a real-world example of licensing and an entry point to academic engagement.

The platform also provides a low risk way of testing the market and showing impact for a research tool that has not previously gained market traction. Once due diligence has been carried out, a product can be set up on the storefront with a low fee (e.g. £250 perpetual licence) and the team can wait to see if there is any interest. This is a really good way for academics to demonstrate 'impact', an aspect that is increasingly important when writing grant proposals or when a team are speaking at conferences - which has led to customers visiting the storefront and licensing a research tool.

4. Best Practices and Transferability

Cambridge Enterprise use their storefront to license research tools under standard licensing terms. The platform can manage the whole licensing process and is customisable – for example Cambridge Enterprise use different approval steps for different product licences.

As part of the process, the e-lucid software populates standard licenses with details provided by the licensee (organisation name, contact information, field of use of the licensed IP etc) which has been used to great effect by Cambridge Enterprise. Putting the onus on the licensee to provide certain information saves time for the licensor.

Because the e-lucid platform manages every aspect of the process, it isn't necessary to manually track progress and that also has a huge cost saving benefit.

Using a platform like e-lucid could be considered to be a key part of future proofing non-exclusive licensing activity - especially for research tools – in that it supports the dissemination of knowledge assets created at universities with public money into the world in the most cost-effective way possible.

Cambridge Enterprise also noted how important it was to have a 'super user' in their team - someone who is responsible for daily management and to have the personal support of the platform provider especially during the on-boarding phase.

To use e-lucid's platform, the user has to pay a yearly fee this might restrict the transferability for some institutions or companies due to budget constraints. Depending on the customer requirements (number of assets, admin users etc) a subscription to the e-lucid platform costs between €2,900 and €11,400 per year for a single organisation.

5. Application of Technology:

e-lucid's platform is primarily aimed at Universities and research institutions that wish to save time transacting licensing IP & knowledge assets or want to scale up their activity in this area. Current e-lucid customers are from the public sector (universities, research councils and public healthcare) but the platform would be equally suitable to any organisation (including commercial) that wishes to streamline its non-exclusive licensing activity.

e-lucid supports its customers by giving market visibility to their lower value assets and providing a cost-effective platform to manage the whole licensing process– licence application and approvals, receiving licence fees and managing access to digital assets.

6. Conclusions and lessons learned

What can be learned from how to support its licensing activity?

The use of the e-lucid platform by Cambridge Enterprise has shown how research organisations can save time by using an online platform to streamline routine licensing tasks and to begin future proofing non-exclusive licensing activity.

What is the wider learning for this type of platform in this market sector?

By saving time on lower value licences, the research tools team are now able to focus energies on more complex licence negotiations. In addition, the team have found that the platform has provided a way to better engage with the researchers who generate the research tools, thus supporting the future pipeline of assets for the store.

Considering the three scenarios addressed by the IMPAC3T-IP project tool-box,, we can note that there are platforms that can expedite the transactional part of licensing (click-through licensing, online payment, digital downloads) which will be particularly useful for the Classical+ (non-patented / digital IP assets suitable for non-exclusive licensing) and Crisis (rapid and often high volume licensing) scenarios.

For more information, please visit https://licensing.enterprise.cam.ac.uk/ or https://e-lucid.com/

2.11. Using TerraCipher to accelerate the lab to market path.

This case study explores TerraCipher's value proposition, use cases, and challenges based on an interview with Will Swain, Co-founder of TerraCipher, and written feedback from the University of Manchester Innovation Factory (UMIF), one of its customers.

1. Introduction

TerraCipher is a platform designed to facilitate the commercialisation of research by enabling the secure hosting, sharing, and licencing of trade secrets, particularly algorithms and software. The platform allows researchers to transition from research to market-ready products without exposing the source IP. Researchers can use TerraCipher's cloud infrastructure to host their code, and end users can access it as a service.

The platform does not act as a code repository; instead, it operates in the "Infrastructure as a Service" category, allowing researchers to share the *functionality* provided by their code, not the code itself. Access can be granted publicly in TerraCipher's own marketplace, Shaipup, or privately with industry or academic partners selected by the researchers.

The University of Manchester Innovation Factory (UMIF) was particularly attracted to TerraCipher because it promises to speed up the commercialisation process of academic research.

2. Background and Challenges

The University of Manchester Innovation Factory faced several critical challenges in commercialising digital technologies, particularly those involving complex algorithms and computational solutions:

- **Limited Commercialisation Visibility:** Academic researchers often develop sophisticated algorithms and computational methods with significant commercial potential. However, identifying viable commercialisation pathways for these abstract technologies proved challenging, as their practical applications and market fit weren't immediately apparent.
- **Resource-Intensive Operationalisation:** Converting academic algorithms into market-ready products traditionally required substantial resources and expertise. This included building robust backend infrastructure, developing API interfaces, establishing cloud hosting solutions, and creating user-friendly interfaces. This "heavy lift" often created a significant barrier between academic innovation and commercial implementation.
- **Market Validation Constraints:** Meaningful market validation was particularly challenging without a verifiable, operational technology. Potential customers struggled to envision integration with existing workflows. Use-case validation required functional prototypes, and value proposition testing required working demonstrations.
- **Time-to-Market Pressure:** Researchers faced competing pressures that complicated the commercialisation process; academic incentives pushed for rapid publication and open-source release, while the required timeline to make a product operational for commercial users was too slow for academic schedules. The gap between academic output and commercial readiness also risked losing market opportunities.

3. Analysis of Results

While still in the early stages of adoption at UMIF, TerraCipher has shown promising results in transforming the approach to digital technology commercialisation:

- **Accelerated Operationalisation:** Projects demonstrate significantly reduced deployment times, faster prototype development for market validation, and a notable reduction in reliance on upfront operational funding.
- **Emerging Market Validation Improvements:** Potential UMIF customers can now access and test technologies more quickly, and smoother integration testing within customer workflows is anticipated.
- **Growing Academic Engagement:** Improved compatibility with academic workflows has increased researcher interest in commercialisation opportunities, and academics report increased comfort with operational processes.
- **Cost-Effective Project Management:** TerraCipher is proving to be a low-risk tool valuable for commercialisation awareness. New pathways for previously challenging projects are emerging, and initial funding requirements are promisingly reduced.
- **Unexpected value creation:** In a separate case to UMIF, mentioned by TerraCipher, an interesting use case emerged when a partner used TerraCipher to clean up noisy data as part of their research pipeline. They realised that this data cleanup process had standalone value and decided to offer it as a separate product through the platform.

4. Best Practices and Transferability

One of the main challenges is making tech transfer offices (TTOs) aware of the platform's value. While sophisticated TTOs understand the benefits, others may see it as a "nice to have" rather than a core solution for discovering market opportunities. TerraCipher addresses this by demonstrating the platform's ability to reduce time to value and facilitate market testing.

Researchers or TTOs may be concerned about disclosing their code, even in a secure environment. TerraCipher mitigates this by ensuring the code remains private and only accessible to authorised users in a secure cloud environment, similar to what most researchers already do with other cloud providers.

Advice for potential TerraCipher adopters includes looking beyond the surface of the hosting functionality. The platform's true value lies in its deep understanding of technology transfer challenges. The team demonstrates a fundamental grasp of technology transfer office challenges, with solutions purposefully designed around commercialisation needs. TerraCipher represents more than a technical solution like Google Cloud or Amazon Web Services—it's a strategic tool specifically engineered to address the unique challenges of technology commercialisation.

Technology Transfer Offices are poised to benefit from the platform by gaining oversight of the research pipeline. This will enable them to identify potential commercialisation opportunities early, reducing the time to market and increasing the chances of successful licencing arrangements.

5. Application of Technology

TerraCipher provides a secure environment for researchers and TTOs to manage and share their code in a way that integrates seamlessly into their existing development pipeline, similar to other code hosting platforms. This allows researchers to deploy their calculators, models or algorithms using familiar tools without exposing core IP, facilitating collaboration and feedback without worrying about the complexities of IP management.

The platform supports the concept of "living research," where software research outputs are continuously updated and improved based on user feedback, rather than being static releases. This keeps the research relevant and up-to-date and is crucial for researchers who want to collaborate with industry partners while protecting their intellectual property.

6. Conclusions and Lessons Learned

TerraCipher is a promising platform that supports researchers and TTOs in managing and commercialising their intellectual property. By providing a secure environment for code sharing and market testing, the tool reduces the barriers to commercialisation and enables both researchers and the TTO staff to focus on their core activities while potential customers assess the research outcomes.

With its “living research” approach, TerraCipher changes the logic of commercialising research. It makes the transferability aspect a core part of the research process from an early stage, creating a compelling value proposition for researchers who may be more inclined to disclose their work earlier to gather stakeholder feedback.

The platform's flexibility and ability to unlock unexpected value make it a tool worthy of consideration by the research community, especially for those IP originators creating software or other digital outputs.

Whether this platform fits one of the three analysed scenarios is still unclear. However, it is most appropriate for Classical Plus as it unveils a new way of triaging and taking to market software assets without the usual complexities of making academic software operational in a commercial environment with no certainty of its viability.

3. Transferability and conclusions

As illustrated in the case studies above, there is an increasing use of various technologies in tools and platforms that facilitate IP licensing activities. These often specifically support individual activities or tasks in the overall process and accelerate or simplify them. However, most providers are increasingly working on offering customers a comprehensive solution, covering as much of the entire value chain as possible with their software or platform. In this respect, specific solutions exist for numerous problems and issues that have already been identified and raised by stakeholders in the field of IP licensing, but awareness and adoption of those solutions is still low in many organisations. Another finding of this report is that many of the tools and platforms integrate AI assistants to enhance user interaction, automate complex tasks, and provide personalised support and facilitate adoption**,** improving efficiency and user experience.

The case studies illustrate that while these tools offer significant benefits, the transferability of each tool depends on factors such as organisational needs, budget, and technological adaptability. Organisations can adopt best practices by focusing on scalable tools that integrate AI to improve usability and automate complex processes. However, challenges, such as compatibility with institutional workflows, cost and language limitations, may hinder broader adoption. Therefore, a key recommendation for organisations wishing to test or implement such tools in their work is to assess the tool-specific requirements and tailor their approach based on their resource capacity and strategic objectives.

Building on the insights from the case studies, it is evident that while existing software tools offer substantial benefits for IP licensing, their effective adoption is contingent upon a variety of factors unique to each organisation or individual. Challenges such as alignment with existing workflows, budget constraints, and language barriers underscore the need for a more tailored approach in selecting and implementing these technologies.

One emerging conclusion is lack of a tool that helps stakeholders to find specific software solutions and platforms suitable to their needs, highlighting features, cost implications and other relevant properties. Such a tool could include a comprehensive Database of Software Tools for IP Licensing. This database could serve as a valuable resource, categorising existing tools and providing detailed descriptions of their features, scope, partner integrations, and relevant use cases. By systematically organising this information, the database could support institutions and companies when searching for a new software tool to facilitate IP licensing activities.

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